



# DAMES & MOORE

A PROFESSIONAL LIMITED PARTNERSHIP

500 MARKET PLACE TOWER, 2025 FIRST AVENUE, SEATTLE, WASHINGTON 98121  
(206) 728-0744

July 19, 1990

Mr. Bob Strong  
Alaska Marine Lines  
18000 Pacific Highway South #800  
Seattle WA 98188

Confirming Agreement  
Soil Vapor Survey  
7100 2nd Ave SW  
Seattle, Washington

Dear Bob:

As you have requested, Dames & Moore will conduct a soil vapor survey at the site located at 7100 2nd Avenue SW, Seattle, Washington. The purpose of the survey is to assess the potential presence of petroleum products in soil which may be associated with existing and former underground storage tanks at the site. Based on the results of this survey, we will provide our opinions concerning future tank excavations and/or remedial alternatives.

A soil vapor survey is a screening technique to evaluate the presence of organic vapors within the soil. The vapors are collected with a vacuum pump and then analyzed with one or more field screening devices. For this survey, we will use an organic vapor analyzer (OVA) in conjunction with an organic vapor monitor (OVM). The use of both instruments may enable us to differentiate between diesel and gasoline-related vapors.

The approach we will take for this project consists of the following steps:

1. A grid will be surveyed near the existing and former tank locations with 20 foot centers.
2. Soil vapor readings will be obtained on four sides of the tank locations. If anomalous readings are obtained at any of the locations, readings will be collected from the next set of grid points. The survey will continue until background readings are obtained. Based on the results of the OVA/OVM readings, field personnel will elect to expand or reduce the grid spacing.
3. A report will be prepared to document our findings, provide interpretations concerning the potential lateral extent of soil contamination, and make recommendations concerning procedures for the future tank excavations and/or remedial alternatives.



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The estimated cost for this task will depend to a large extent on the conditions encountered in the field. We estimate that the work will require between one and two days and that between 20 and 40 grid points will be surveyed. The estimated cost for this work is approximately \$6,000. Table 1 provides a more detailed explanation for these estimated costs.

As you requested, we have tentatively scheduled our field activities during a weekend, July 28 and 29. We will confirm these dates with you next week.

This work will be conducted in accordance with the terms and conditions of the Service Agreement between Alaska Marine Lines and Dames & Moore dated July 12, 1990. If you have any questions or comments concerning our approach or proposed activities, please call us.

Sincerely,

DAMES & MOORE

Susan C. Kent

Project Manager